

3.6 Hazards and Hazardous Materials

This section evaluates the potential for the project to encounter hazards and hazardous materials.

3.6.1 Setting

Wildland Fire

The California Public Resources Code includes fire safety regulations, described in **Appendix D**, that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors¹ on construction equipment that use an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided on-site for various types of work in fire-prone areas. The Public Resources Code requirements would apply to construction activities at Lake Perris because this site is located in an area designated as a “Wildland Area That May Contain Substantial Fire Risks and Hazards” (California Department of Forestry and Fire Protection, 2007).

Emergency Operations Planning

Riverside County has developed an Emergency Operations Plan (EOP) containing detailed emergency response checklists outlining procedures to be followed in the event of natural disasters, severe storms, major system failures, or terrorist attacks (Riverside County, 2006). The District prepares this site-specific emergency response plan under the guidance of the Riverside County Emergency Operations Plan. The plan identifies staff people to perform emergency duties and lists the resources needed to accomplish emergency tasks.

Potential Presence of Hazardous Materials in Soil and Groundwater

To evaluate the potential presence of hazardous materials in the vicinity of planned construction activities, an environmental database review (EDR, 2007) was conducted to identify permitted uses of hazardous materials,² environmental cases,³ and spill sites⁴ where soil and/or groundwater contamination may be present. Search distances are consistent with those specified in the current American Society for Testing and Materials (ASTM) International Standard E 1527, Phase I Environmental Site Assessment Standard. A description of each database reviewed and the date of the database is provided in **Appendix D**; those databases with identified sites are listed in **Table 3.6-1**.

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- ¹ A spark arrestor is a device that prohibits exhaust gases from an internal combustion engine from passing through the impeller blades where they could cause a spark. A carbon trap is commonly used to retain carbon particles from the exhaust.
 - ² Permitted hazardous materials uses are facilities that use hazardous materials or handle hazardous wastes, but are assumed to comply with current hazardous materials and hazardous waste regulations.
 - ³ Environmental cases are those sites suspected of releasing hazardous substances or have had cause for hazardous substances investigations and are identified on regulatory agency lists.
 - ⁴ Spill sites include locations where a spill of hazardous materials has been reported to state or federal regulatory agencies.

**TABLE 3.6-1
DESCRIPTION OF ENVIRONMENTAL DATABASES**

Database Name	Description of Database
CA FID UST	California Environmental Protection Agency (Cal-EPA) Facility Inventory Database—Underground Storage Tanks (USTs). Facilities in a historical listing of active and inactive USTs. ^a
Cortese	Hazardous Waste & Substances Sites. List of sites designated by the State Water Resource Control Board (leaking underground storage tank), the Integrated Waste Board (solid waste facilities/landfill sites), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency.
ENVIROSTOR	The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifies sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.
LUST	Geotracker's Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents.
SCH	This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.
SWEEPS UST	Statewide Environmental Evaluation and Planning System. A listing of UST sites that was prepared for the State Water Resources Control Board in the early 1980s, but is no longer maintained or updated. ^a

^a Search area: within 1/4 mile of property.

SOURCES: ESA, 2007

Using ASTM International-specified search distances, one environmental regulatory case was identified within the Lake Perris SRA. The database search identified the fuel storage and dispensing facility located at the marina docking facility at 17801 Lake Perris Drive at the western edge of the dam. Based on the database review, this facility has been historically impacted by a leaking underground gasoline storage tank (CA FID UST, LUST, Cortese, and SWEEPS UST databases). Santa Ana Regional Water Quality Control Board (Santa Ana RWQCB) records indicate that three single-wall fiberglass storage tanks were removed in 1994 and replaced by one double-walled storage tank. Although the contamination source was removed, soil sampling conducted in 2006 revealed residual contamination in soils within the area of the previous tanks. Further remedial action currently proposed includes vapor extraction (Burnhardt, 2007).

Hazardous Building Materials

Old structures have the potential to contain hazardous building materials, including asbestos, polychlorinated biphenyls (PCBs), and lead-based paints. State and federal laws control the removal and disposal of hazardous materials and require the generator to follow strict notification and abatement procedures prior to disturbance of these materials.

Asbestos is a common name for a group of naturally occurring fibrous silicate minerals that are made up of thin but strong, durable fibers used in building materials, including insulation, shingles, and floor and ceiling tiles. Asbestos could be present in adhesives or other surface treatments used in construction and the regular maintenance of the outlet works.

PCBs are mixtures of synthetic organic chemicals with physical properties ranging from oily liquids to waxy solids that are useful to reduce oil temperature. Until the use of PCBs was made illegal, they were used widely in hundreds of industrial and commercial applications, including use in hydraulic, electrical, and heat transfer equipment; and as plasticizers in caulking, paints, plastic, and rubber compounds. Some PCBs still remain in older equipment.

Lead-based paint is toxic to humans, particularly young children, and can cause a range of human health effects depending on the level of exposure. Lead-based paints were used on the surfaces of many older structures; if such paint is separated from a structure due to peeling, lead may also be found in nearby soil. Tetra-ethyl lead, which was used as a gasoline additive until it was phased out in 1986, is also found in high concentrations in the soils adjacent to major roadways that were constructed prior to its phase-out.

3.6.2 Regulatory Framework

Hazardous materials, defined in Section 25501(h) of the California Health and Safety Code, are materials that, because of their quantity, concentration, or physical or chemical characteristics, pose a potential hazard to human health and safety or to the environment if released. Title 22 of the California Code of Regulations, Division 4.5, Chapter 11 contains regulations for the classification of hazardous wastes. A waste is considered hazardous if it is toxic (causes human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), or reactive (causes explosions or generates toxic gases) in accordance with the criteria established in Article 3. Article 4 lists specific hazardous wastes, and Article 5 identifies specific waste categories, including Resource Conservation and Recovery Act (RCRA) hazardous wastes, non-RCRA hazardous wastes, extremely hazardous wastes, and special wastes.

Hazardous materials and hazardous wastes are extensively regulated by federal, state, and local regulations. In general, these regulations provide definitions of hazardous materials; establish reporting requirements; set guidelines for handling, storage, transport, remediation, and disposal of hazardous wastes; and require health and safety provisions for both workers and the public. Regulatory agencies also maintain lists, or databases, of sites that are permitted to handle hazardous wastes or store hazardous materials in underground storage tanks, as well as sites where soil or groundwater quality may have been affected by hazardous materials.

The major federal, state, and regional agencies enforcing hazardous material regulations include: the U.S. Environmental Protection Agency (federal); the California Department of Toxic Substances Control (DTSC) of the California Environmental Protection Agency (state); the Santa Ana RWQCB and the SCAQMD (regional). In addition, a number of local agencies at the county and city level are responsible for regulating hazardous materials in the project area. Under

the Certified Unified Program Agency regulations, the Hazardous Materials Management Division (HMMD) of the Riverside County Department of Environmental Health is responsible for implementing most hazardous materials regulations in Riverside County.

The federal Occupational Safety and Health Administration (OSHA) enforces regulations covering the handling of hazardous materials including explosives. The regulations are designed to protect workers from hazards associated with encountering hazardous materials at the work site. The regulations require certain training, operating procedures, and protective equipment to be used at work sites that could encounter hazardous materials. Asbestos handling regulations are included in 29 CFR Part 1910.1001; explosives handling is included in 29 CFR Part 1910.109. The Department of Transportation (DOT) regulates transport of hazardous materials including explosives in 49 CFR Parts 171-179.

The RWQCB requires registration of an above-ground fuel storage tank at a construction site if the tank is 20,000 gallons or larger, or if the aggregate volume of above-ground petroleum storage is greater than 100,000 gallons. The above-ground storage tank used to temporarily store diesel during construction would be on the order of 1,000 gallons in size and would not be subject to this act.

3.6.3 Impacts and Mitigation Measures

Significance Criteria

For the purposes of this analysis and consistent with Appendix G of the *CEQA Guidelines*, the proposed project would result in potentially significant impacts if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Result in hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school;
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- Be located within an area covered by an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and would result in a safety hazard for people residing or working in the project area;
- Be located within the vicinity of a private airstrip and would result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Title 40 of the Code of Federal Regulations (40 CFR) and Title 22 of the California Code of Regulations define and identify hazardous materials and wastes and provide threshold levels for these substances. Regulatory agencies determine what constitutes a substantial hazard or an insignificant level of hazardous materials on a case-by-case basis, depending on the proposed uses, potential exposure, and degree and type of hazard.

Airport Compatibility

Lake Perris is located in the vicinity of nearby March Air Reserve Base. The March Air Reserve Base airstrip lies approximately 2.5 miles west of the dam. The portion of Lake Perris SRA covered by the March Air Reserve Base zone of influence in the countywide airport land use compatibility plan is a low risk area characterized by low noise impacts from over-flights (Riverside County, 2004). Therefore, impacts from airport-related activities would be less than significant. Lake Perris is not covered by any other airport zone of influence. The closest civilian airport is Perris Valley Airport, which is located more than five miles to the south near Highway 74.

Emergency Response Plans

Emergency notification and response are the responsibilities of the local jurisdictions including the County of Riverside and the Cities of Perris and Moreno Valley. Local law enforcement agencies would be responsible for evacuation plans and implementation in the event of a failure in the dam. The proposed project would enhance the safety of the dam. During construction, the lake level would remain at the reduced level to protect public safety. The project would not adversely affect local safety or emergency response plans. Measures to avoid interference with emergency access routes during construction are addressed in Section 3.8, Traffic and Circulation.

Hazardous Materials

Except for the temporary use of diesel and other operational-related hazardous materials during the construction period, operation of Lake Perris would not involve the long-term use of hazardous materials. Thus, there are no long-term impacts related to the routine transport, use, or disposal of hazardous materials; upset and accident conditions involving the release of hazardous materials; or handling of hazardous materials, substances, or wastes within ¼ mile of an existing or proposed school.

Impact 3.6-1: The proposed project could expose workers and the public to hazards including explosives, fuels, and hazardous materials that could be present in excavated soil.

Blasting would require transport, storage, and use of blasting agents controlled by DOT and OSHA regulations. DWR would require contractors to prepare a Blasting Plan (see Mitigation Measure 3.9-1d) that would outline regulatory requirements for safe transport, storage and use of blasting agents. Compliance with these regulations would provide for the safety of workers and the general public.

Construction activities would require storage of fuels, lubricants, solvents, and oils for maintenance of on site equipment. If these materials were improperly stored or spilled, workers could be exposed. None of the materials would pose a threat to neighboring land uses since the quantities would be low and none of the materials could travel quickly off site such as in vapor clouds. Management of hazardous materials used during the construction process would be regulated under USEPA regulations (40 CFR). Compliance with regulations would ensure that workers, visitors to the park, and the general public would not be exposed to hazardous materials.

The proposed project would require substantial excavation, grading, and earthmoving within watershed lands that have remained relatively undisturbed since the construction of Perris Dam. It is possible during project activities requiring excavation that soil contamination could be discovered in the shallow subsurface soils, such as that surrounding the previously excavated leaking underground storage tank (LUST). In many cases, especially in urbanized areas, residual petroleum from leaking underground tanks and other localized surface spills are discovered in shallow excavations. When uncovered and exposed to air, hazardous materials in the soil can be released, causing vapors to come in contact with construction workers and sometimes the public. Depending on the nature and extent of any contamination encountered, adverse health effects and nuisance vapors could result if proper precautions are not taken. Contaminated soil could also require disposal as a restricted or hazardous waste.

Regulatory database review conducted for the proposed project identified one hazardous materials case within the vicinity of the project area. The source of contamination, a leaking fuel tank, has since been removed, the extent of impact has been delineated, and remediation is currently underway. The depth of the impacted soil has been recorded and concentrations of the fuel in surrounding soil have been determined. Proposed excavation operations are not expected to encounter soil contamination in quantities that would cause a human health risk if uncovered and exposed to open air.

Areas adjacent to the project are not involved in and would not likely become involved in hazardous materials use or storage before or during the proposed project construction activities. Further, although the operation of motorized watercraft is currently a permitted use on Lake Perris, residual oils and fuels present in water and soils from motor craft are not expected to be present at concentrations high enough to pose a significant risk to construction personnel exposed to these contaminants during the project.

Significance: Less than Significant.

Impact 3.6-2: The proposed project could expose workers and the public to asbestos-containing building materials that could be present in structures to be demolished by the project.

Asbestos containing pipes may be encountered during excavation at the toe of the dam. The pipes are part of the drainage system installed when the dam was first constructed in the 1970s. Demolition, storage, transportation, and disposal of these materials would be subject to hazardous

materials regulations including OSHA and USEPA regulations. The transite pipe that may be encountered is generally not friable and if handled properly would pose minimal risk to workers or neighboring land uses. Nonetheless, improper handling of pulverized transite can emit friable asbestos into the air. DWR would require contractors to comply with OSHA and USEPA regulations covering asbestos management. Implementation of a site safety plan would ensure that the materials would be handled to minimize exposure of workers and neighboring land uses to asbestos.

Mitigation Measures

Mitigation Measure 3.6-2: DWR shall prepare a site safety plan that outlines the procedures necessary to remove potentially asbestos-containing building materials encountered during the excavation activities. The site safety plan shall outline personal protection requirements and training requirements for workers and shall outline removal and disposal methods.

Significance after Mitigation: Less than Significant.

Wildland Fires

Impact 3.6-3: Construction of the proposed project could increase risk of wildland fires.

The use of construction equipment and temporary on-site storage of diesel fuel could pose a wildland fire risk because Lake Perris is located in a “Wildland Area That May Contain Substantial Fire Risks and Hazards” designated by the California Department of Forestry and Fire Protection. The time of the greatest fire danger is during the clearing phase, when people and machines are working among vegetative fuels that could be highly flammable; if piled on-site, the cleared vegetative materials could also become sources of fuel for fires. Potential sources of ignition include equipment with internal combustion engines, gasoline-powered tools, and equipment or tools that produce a spark, fire, or flame. Such sources include welding equipment, sparks from blades or other metal parts scraping against rock, overheated brakes on wheeled equipment, friction from worn or unaligned belts and drive chains, and burned-out bearings or bushings. Sparking as a result of scraping against rock is difficult to prevent. The other hazards result primarily from poor maintenance of construction equipment. Smoking by on-site construction personnel is also a source of ignition during construction. Compliance with the requirements of the Public Resources Code as outlined below in Mitigation Measure 3.6-3 would ensure that potential impacts due to construction-related wildland fires are less than significant.

Mitigation Measures

Mitigation Measure 3.6-3: In accordance with the Public Resources Code, the construction contractor shall be required to comply with the following legal requirements during construction activities for the proposed project:

- Earthmoving and portable equipment with internal combustion engines shall be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (PRC Section 4442).

- Appropriate fire suppression equipment shall be maintained during construction – from April 1 to December 1 (PRC Section 4428).
- On days during the year when a burning permit is required, flammable materials shall be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor shall maintain the appropriate fire suppression equipment (PRC Section 4427).
- On days during the year when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines shall not be used within 25 feet of any flammable materials (PRC Section 4431).

These measures shall be included in the contractor's contract specifications. The contractor shall be responsible for the implementation and monitoring of these safety measures and regular reporting to DWR.

Significance after Mitigation: Less than Significant.

Mitigation Measure Summary Table

Table 3.6-2 presents the impacts and mitigation summary for Hazards and Hazardous Materials.

**TABLE 3.6-2
HAZARDS AND HAZARDOUS MATERIALS IMPACTS AND MITIGATION SUMMARY**

Proposed Project Impact	Mitigation Measure	Significance after Mitigation
Contaminated Soil Exposure: The proposed project could expose workers and the public to hazards including explosives, fuels, and hazardous materials that could be present in excavated soil.	None required	--
Asbestos Exposure: The proposed project could expose workers and the public to asbestos-containing building materials that could be present in structures to be demolished by the project.	3.6-2	Less than Significant
Wildland Fires: Construction of the proposed project could increase risk of wildland fires.	3.6-3	Less than Significant